

Smart Skies			
2006 Science			
Program of Studies			
Kentucky Science			
Grade 5			
Activity/Lesson	State	Standards	
Fly by Math	KY	SCI.5.SC-5-MF-U-1	Predictions and/or inferences about the direction or speed of an object can be made by interpreting graphs, charts or descriptions of the object's motion.
Fly by Math	KY	SCI.5.SC-5-MF-S-2	Create and interpret graphical representations in order to make inferences and draw conclusions about the motion of an object
Line Up with Math	KY	SCI.5.SC-5-MF-U-1	Predictions and/or inferences about the direction or speed of an object can be made by interpreting graphs, charts or descriptions of the object's motion.
Line Up with Math	KY	SCI.5.SC-5-MF-U-4	Some comparisons may not be 'fair' because some conditions (e.g. mass, force, speed, friction) might not be the same.
Line Up with Math	KY	SCI.5.SC-5-MF-S-2	Create and interpret graphical representations in order to make inferences and draw conclusions about the motion of an object
Line Up with Math	KY	SCI.5.SC-5-MF-S-3	Design and conduct experiments to examine the effects of variables on the straight line motion of objects. Analyze, review and critique each other's experiments
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Grade 6			
Activity/Lesson	State	Standards	
Fly by Math	KY	SCI.6.SC-6-MF-U-2	When any force acts on an object, the change in speed or direction depends on the size and direction of the force.
Fly by Math	KY	SCI.6.SC-6-MF-S-1	Use observations and appropriate tools (e.g., timer, meter stick, balance, spring scale) to document the position and motion of objects
Fly by Math	KY	SCI.6.SC-6-MF-S-2	Use graphical and observational data to make inferences, predictions and draw conclusions about the motion of an object as related to the mass or force involved
Line Up with Math	KY	SCI.6.SC-6-MF-U-2	When any force acts on an object, the change in speed or direction depends on the size and direction of the force.
Line Up with Math	KY	SCI.6.SC-6-MF-S-2	Use graphical and observational data to make inferences, predictions and draw conclusions about the motion of an object as related to the mass or force involved
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Grade 7			
Activity/Lesson	State	Standards	
Fly by Math	KY	SCI.7.SC-7-MF-S-1	Use appropriate tools and technology (e.g., timer, meter stick, balance, spring scale) to investigate the position, speed and motion of objects
Fly by Math	KY	SCI.7.SC-7-MF-S-2	Test the cause and effect relationship between straight-line motion and unbalanced forces
Fly by Math	KY	SCI.7.SC-7-MF-S-3	Investigate balanced and unbalanced forces and their effect on objects and their motion
Fly by Math	KY	SCI.7.SC-7-MF-S-4	Make inferences and draw conclusions about the motion of objects, and predict changes in position and motion as related to the mass or force
Line Up with Math	KY	SCI.7.SC-7-MF-S-1	Use appropriate tools and technology (e.g., timer, meter stick, balance, spring scale) to investigate the position, speed and motion of objects
Line Up with Math	KY	SCI.7.SC-7-MF-S-4	Make inferences and draw conclusions about the motion of objects, and predict changes in position and motion as related to the mass or force
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Grade 8			
Activity/Lesson	State	Standards	
Fly by Math	KY	SCI.8.SC-8-MF-S-2	Explain and experimentally verify how Newton's Laws show that forces between objects affect their motion, allowing future positions to be predicted from their present speeds and positions
Fly by Math	KY	SCI.8.SC-8-MF-S-3	Investigate motion of objects to generate and experimentally test predictions/conclusions. Compare and critique the results of others for accuracy, identifying strengths and weaknesses in the experiment, insisting on the use of evidence to support decisions
Line Up with Math	KY	SCI.8.SC-8-MF-S-2	Explain and experimentally verify how Newton's Laws show that forces between objects affect their motion, allowing future positions to be predicted from their present speeds and positions
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Grades 9-12			
Activity/Lesson	State	Standards	
Fly by Math	KY	SCI.9-12.SC-H-MF-U-1	Representing and describing motion in a variety of ways provides data that can be used to construct explanations and make predictions about real-life phenomena.
Fly by Math	KY	SCI.9-12.SC-H-MF-S-1	Design and conduct investigations involving the motion of objects and report the results in a variety of ways
Fly by Math	KY	SCI.9-12.SC-H-MF-S-7	Create conceptual and mathematical models of motion and test them against real-life phenomena
Line Up with Math	KY	SCI.9-12.SC-H-MF-U-1	Representing and describing motion in a variety of ways provides data that can be used to construct explanations and make predictions about real-life phenomena.
Line Up with Math	KY	SCI.9-12.SC-H-MF-S-1	Design and conduct investigations involving the motion of objects and report the results in a variety of ways
Line Up with Math	KY	SCI.9-12.SC-H-MF-S-7	Create conceptual and mathematical models of motion and test them against real-life phenomena